US-PAT-NO: 5745867

DOCUMENT-IDENTIFIER: US 5745867 A

TITLE: Method and apparatus for reducing message length within a communication system

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Detailed Description Text - DETX (13):

As described in TIA/EIA/IS-95A section 7.7.2.3.2.1, in its System Parameters Message, base site 201 periodically broadcasts its geographic location (latitude/longitude information accurate to 0.25 seconds) along with its base identification. In the preferred embodiment of the present invention, base site's 201 geographic location is utilized as a reference geographic location, but in alternate embodiments of the present invention, the reference geographic location can be any fixed point external or internal to base site 201. Remote unit 213 receives the reference geographic location and

stores it in a
reference location table (not shown). During operation, remote unit 213
notifies base site 201 (via uplink communication signal 216) of a desire to go
from point A to point B. Base site 201 provides starting and ending point
information to route planning equipment 207 via landline 205, and utilizing map
database 103 and route planner 105, route planning equipment 207 calculates a
route from point A to point B and provides information regarding the route to
base site 201. In the preferred embodiment of the present invention, route
planning equipment 207 provides translator 203 with a series of 44 bit absolute
coordinates that define the location of reference points 109. Translator 203
determines a relative coordinates of each reference point 109 by subtracting a
constant value from each absolute coordinate and transmits the relative
coordinates of each reference point to remote unit 213. As discussed above, in
the preferred embodiment of the present invention the reference geographic
location is subtracted from each absolute coordinate in order to obtain the
relative coordinates of each reference point. Remote unit 213 receives the

relative coordinates of each reference point 109 and utilizing the reference geographic location broadcast by base site 201, calculates the absolute coordinates of each reference point 109 by adding the reference geographic location to each relative coordinate. Broadcasting only the relative coordinates of each reference point to remote unit 213 allows reference points to be transmitted to remote unit 213 in a shorter length message than with prior-art methods.

Current US Original Classification - CCOR (1):
455/456.3